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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,691	01/15/2003	Raanan Fattal	383/03758	4149
7590 01/22/2007				
William H. Dippert, Esq. Reed Smith LLP 599 Lexington Avenue, 29th Floor New York, NY 10022-7650		EXAMINER STREGE, JOHN B		
		ART UNIT 2624		PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	01/22/2007	PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/813,691

Applicant(s)

FATTAL ET AL.

Examiner

John B. Strege

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,7,9-12,15,17,19-22,25,27,29 and 30 is/are rejected.
- 7) ☒ Claim(s) 3,4,6,8,13,14,16,18,23,24,26 and 28 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Response to Amendment***

1. The amendment received 12/01/06 has been entered in full. Due to the amendment the objections have been withdrawn.

***Response to Arguments***

2. Applicant's arguments with respect to claims 1-30 have been considered but are moot in view of the new grounds of rejection.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2,5,7,11-12,15,17,21-22,25, and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Alderson et al. USPN 6,973,218 (hereinafter "Alderson").

Alderson discloses a gradient domain compression system (700 of figure 7) for generating, from an input image having a high luminance dynamic range, an output image having a lower luminance dynamic range (col. 1 lines 15-21), the system comprising: (a) a gradient image generator module configured to generate, from the input image, a gradient image representing, for respective points of the input image, gradients in the luminance of the input image wherein gradients comprise a vector of at

least two-dimensions (col. 7 lines 26-29 discloses that gradient data is generated in the steps prior to numeral 716 in figure 7); (b) a gradient compression module configured to receive the gradient image and generate a compressed range gradient image in which the range of gradients are compressed (col. 7 lines 26-29 disclose that at least a portion of the low-frequency gradient data is removed which generates a compressed range gradient image); and (c) an output image generator module configured to receive the compressed range gradient image and to generate therefrom an image, the image generated by the output image generator module comprising the output image (numeral 310 of figure 3 discloses a data output interface after the dynamic compression as does numeral 518 of figure 5).

Regarding claim 2, Alderson discloses a gradient attenuation function generator module configured to generate for respective points in the gradient image, a gradient attenuation function whose value for respective points in the gradient image is configured to reduce the range of gradients in the gradient image; and an attenuated image gradient generator module configured to generate from the gradient image and the gradient attenuation function, the compressed range gradient image (col. 7 lines 26-42, the attenuation function is achieved by multiplying the low-frequency gradient data by a scale factor and subtracting the scaled data from the frame of image data input to the dynamic range compression).

Regarding claim 5, the function is used to reduce the range of gradients (col. 7 lines 26-42).

Regarding claim 7, the output is close to the compressed gradient image (see figure 5).

Claims 11-12, 15 and 17 are similarly analyzed to claims 1-2,5 and 7 respectively.

Claims 21-22, 25 and 27 are similarly analyzed to claims 1-2,5 and 7 respectively.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-10,19-20,and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alderson in view of the Applicant's admitted prior art (hereinafter "AAPA").

Regarding claim 9 Alderson discloses a preprocessor module to preprocess an image (step 704 of figure 7). Alderson does not disclose that this takes the logarithm of the input image.

The AAPA discloses that problems arise in dynamic range compression and that the reflectance function and the illumination function can be separated by taking the logarithm of the image. This allows for contrast enhancement of the image (see lines 7-19 on page 3).

Alderson and the AAPA are analogous art because they are from the same field of endeavor of dynamic range compression.

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine Alderson and the AAPA to take the logarithm of the image in the preprocessor. The motivation would be to enhance the contrast of the image. Thus it would have been obvious to one of ordinary skill in the art to combine Alderson and the AAPA to obtain the invention as disclosed in claim 9.

Regarding claim 10, the AAPA discloses that if the logarithm of the input image is taken then it later must be exponentiated thus it would be obvious to use a post-processor to carry out the exponentiation.

Claims 19-20 are similarly analyzed to claims 9-10.

Claims 29-30 are similarly analyzed to claims 9-10.

#### ***Allowable Subject Matter***

6. Claims 3-4,6,8,13-14,16,18,23-24,26, and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John B. Strege whose telephone number is (571) 272-7457. The examiner can normally be reached on Monday-Friday between the hours of 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JS

  
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